2.1 Introduction

In many spheres of the natural sciences, specifically in the Western world, strong continuous suggestions go forth for the non-existence of God. Take for example the late American astronomer Carl Sagan, whose opening line in his book *Cosmos* reads: “The Cosmos is all there is, there was, or will ever be” (1984:4). This claim of Sagan obviously raises the question: How does he know? The remark clearly expresses scientific rationalism, the attitude that science is the solution to all problems. From a Christian perspective one has to ask: Is there a valid science that theology could dialogue with, and if so, *should* they be in dialogue with them?

Firstly, theology should not reject natural science, seeing as both natural science and theology seek to understand something of the world in which they live. Generally, both assume the universe is understandable, thus any discoveries made will always have meaning. Hence, one could say that good theology will always find an affinity with good science.
As such, Erickson (2001:74) clearly agrees with this statement by putting forth that while the Bible is theology’s primary source for information, it is not the only one. Although one should carefully evaluate alternative sources, they can play a significant part in helping to clarify difficult issues in the Bible. For instance, Scripture teaches that God has created human beings in His own image; but what does this image consist of? The Bible, unfortunately, says very little about the image of God in humans, but it is clear from Scripture, that this image is what distinguishes humans from the rest of the creatures God has created. Since the Bible and the behavioural sciences intersect with one another at this point of common interest and concern, the behavioural sciences may be able to help identify what is unique about the human. Thus, it could yield at least a partial understanding of what this image of God is. Another area would involve God’s creation. If God’s creation involves the rest of the universe, both living and inherent, then the natural sciences could help one understand what He has done. There are many other such areas that theology could merge with in the natural sciences, but the idea behind the preceding statement is to recognise that they can.

One also has to realise that God is in reality unknown apart from the Word and the Spirit, because God and life are blurred through sin. It is only through the death and resurrection of Christ and the Holy Spirit indwelling in a person, that life becomes real. Barton (1999:11) rightly states that confusion surrounds many scientists and ordinary people, about whom the God of the
Bible is, and what He can do. They do not see God as Creator, Redeemer and Guide in life, but rather as a remote figure occupying a strange private world of half remembered Bible stories and beliefs. Therefore, it is time - and it is already happening in many areas - for science and theology to dialogue with each other. Each field should realise that in their own unique way, they can contribute, no matter how small, to a better understanding of reality. But, before one can successfully do this, an understanding of what constitutes a world-view needs to be explored.

As stated in the introductory chapter, the world, according to Huntington (1993:22), is divided not so much by geographic boundaries as by religious and cultural traditions, by people’s most deeply held beliefs - by world-views. So argued this distinguished Harvard scholar in a celebrated article a few years ago. And many Christians would agree, because Christians are religious creatures, their lives are defined by their ultimate beliefs more sharply than by any other factor. Clearly, it seems, the drama of history is moved along the frontiers of great belief systems. But if this is so, what does it tell one about the divisions in the world today?

Although Huntington is correct in what he says, it goes a little deeper than that. A person’s belief system not only has the ability to move or change history, it can cause divisions that split groups, organisations, and even religious institutions, as will be explored further on in chapter 3.
Regarding this, the author would like to present a holistic and overall view of what one may regard as the three basic structures that make up the differing world-views. This will specifically be related to reality within science and theology.

2.2 Categorising World-Views on Reality

The three basic world-view structures are:

- The first world-view is one that recognises both an ordinary and an ultimate reality, with God being the architect of both; this is a Biblical world-view.

- The second world-view holds that there is a reality which lies beyond the physical space-time universe; this is a Quantum Physics world-view.

- The third world-view holds that there is nothing beyond this reality, and that everything merely interacts in such a way as to form a whole; this is an Evolutionary world-view.

Further to this—

- The first view establishes itself on the belief that God is the sole Creator who sustains everything spiritually and physically.
• The second view, founded on a "Meta" - from the Greek word meaning behind or after view of reality, does not acknowledge a Divine purpose.

• The third view establishes itself on a belief in a purposeless wholeness believing that the various parts interact in a sort of cosmic dance of reality; for example Darwin’s evolutionary theory.

If one had to draw a simple diagram depicting these three ideas of reality, one would have a better picture of the seemingly conflicting ideas of reality between natural science and theology.

2.3 The Basic Structure of World-Views

![Diagram showing the basic structure of world-views]
‘A’ depicts the Biblical world-view in which God interacts with both the physical and spiritual realms, i.e. a transcendent God.

‘B’ depicts them as essentially unified although containing their own distinctive, i.e. an Immanent God.

‘C’ depicts a purposeless wholeness, i.e. an absent God.

2.4 The Context of the Problem

As presented in the introductory chapter, the real difference between these world-views is their acknowledgement or denial of an intelligence and purpose beyond all expressions of perceived reality. The acceptance or denial of a personal God thus divides all world-views into two categories; the scientific and theological as depicted in the above diagrams. Thus, a question one should ask is: How can science bring value and understanding to theology?

2.5 The Value of Science to Theology?

For Knudsen (1979:8), scholars like Herman Dooyeweerd and Abraham Kuyper (1943), believed there is a legitimate place for science in the way God has ordered things. Many believe science to be a God-given means for disclosing the potentialities of the cosmos and that science is a good gift of God and thus
one should use it to His glory. In the view of Knudsen, science is one of various spheres ordained by God, thus a divinely ordained activity.

Yet faith and science, according to most people, are two incompatible terms. For centuries, both disciplines have struggled to decide how to correlate the two views. Again, one may ask: Can science bring value to theology? To take this one step further, one may ask: Is there an authentic science that authentic Biblical theology could and should be in dialogue with?

In answering this, the first problem one confronts in dialoguing with the human, social and natural sciences, is their use of the word God in their writings. Fischer (1994:188) states that the word God often appears in the writing of scientists, especially those who are more philosophically inclined, or who write for more popularised readerships. He further says that it is not unusual to find the word God used over and again in popular books and articles. This is specifically prevalent, he says, in areas of cosmology, fundamental particles and forces, including the origin of the universe and significantly in that of scientific methods and knowledge. The question is: Are they accurately reflecting in their writings the true sphere of what makes up reality by invoking the name of God in their work?

For example, the word God appears in “A Brief History of Time” by Stephen Hawking, five times in the first chapter, and eight times in the last four
pages of the final chapter. Thus, one could ask: Who or what is the god that these frequent usages by science refer to?

2.6 Religious Gaps

Many scientists, philosophers and so-called post-modern theologians argue that in the face of scientific advances, a belief in intelligent design is becoming less of an alternative than ever before. For example, Christians hold that the existence of the world or the existence of life can best be explained by acknowledging a Divine Creator. The Christian believes that this constitutes evidence for a belief in a Divine Creator. When the religious critic says there is no evidence, he or she does not mean to deny the existence of the world or of life, but is rather serving notice that the background principles that give evidential status to a belief in a Divine Creator are not acceptable as there is no evidence. By claiming there is no evidence, the critic is in effect saying, the background principles that a believer holds to, e.g. that there could not have been a world had it not been for a Creator, are false.

Another challenge is that natural science has consistently taken over more and more of the territory once occupied by religious beliefs. For instance, it was once thought that stars and planets moved by supernatural agency, now, science has given a naturalistic explanation.
Humanist Chris Brockman (1978) wrote a children’s book entitled, *What about the Gods?* In this book one reads, “We no longer need gods to explain how things happen. By careful thinking, measuring, and testing, we have discovered many of the real causes of things, and we’re discovering more all the time. We call this thinking”. In their review of this book, the *Journal of Educational Change* (1990) stated, "An excellent book ... The approach is open, clear, and totally non-prejudiced."

One might or might not accept this view, but a central ingredient of most religious faiths is a God who acts in human affairs. Therefore, a belief in a deity who is *personal* is a major principle of the Judeo-Christian heritage. Remove this reality, and the belief system collapses. Goriuch and Smith (1983:340) argue that for a person believing in God, events with an extreme or unlikely outcome may be viewed as caused by God. This is especially likely to happen when no naturalistic explanation exists, for if such an explanation existed, then the outcome would seem more likely, i.e. seeing God as responsible only when no other causative agent is present.

Drees (1991:643-644) puts it bluntly, “if we appeal to God when our technology (including medicine) fails, we assume a ‘God of the gaps’”. He further states that in conversations on theology and science, there is the critical expression *God of the gaps* referring to the tendency to focus on holes in one’s
knowledge or limitations in current understanding and assuming that such gaps are where God is at work.

Science should realise that with an increase in knowledge and power, ones responsibility increases as well. No one can doubt that technology influences one’s understanding of reality. If technology and the advances made in natural science and theology are not responsibly handled, a distortion in understanding reality will lead to a distortion in understanding who God is, and His purpose for creation. Within the ambience of Christian thought, one finds reference to humans as stewards and as co-creators. Humans must therefore take responsibility for their actions. In the view of Hall (1990), stewardship has become prominent when one reflects on the ecological damage that human beings have done. Stewardship is therefore seen as taking up what God has entrusted to humans, i.e. humanity must work for the good of all creation, and be guided by the Holy Spirit.

2.7 The God Who Intervenes

Whether one chooses to believe or not, God does provide a deeper explanation of the physical universe through His Word, than scientific explanations. But, the word *God* is not merely a name for that deeper explanation. The God of the Biblical Christian world-view transcends scientific explanations, and is in no way dependant on it. Neither is it a mere extrapolation from scientific knowledge.
Therefore, it is a distressing reality that many religious people speak only of God when human knowledge has ended, or when human resources fail. Bonhoeffer (1968:142) sarcastically stated, “it is always the deus ex machina that they bring on to the scene, either for the apparent solution of insoluble problems, or as strength in human failure …” Bonhoeffer (1968:187) further argued that the search for the strength of God only in the weakness of man, can have no other effect than to destroy the reality of God for humans.

Although Bonhoeffer is correct in what he says one must conclude from a Christian perspective, that God is bringing humanity to the point where they will have the ability and knowledge to respond to more and more human needs. If this is the case then not only is it possible for better decisions to be made by humans than ever before, but it becomes wrong for them to shirk this responsibility.

The question one may now ask is: How is God with humanity, and how does He help humanity today? Bonhoeffer (1968:188) replies that humanity has the key to the power of God in the world, i.e. in the cross of Jesus Christ. Concerning the world; the cross is a sign of weakness, evidence of the world pushing God out, yet this is the way that God brought salvation to humanity. God brought salvation by suffering, not by His omnipotence. Thus, by falling victim to the world, God remains Victor over the world.
In the view of Pannenberg (1991:8) the word God, in the context of western culture is almost exclusively used in the singular. One may or may not believe in God or “a” God; one may refer to “God” as a human protector or myth; but it is always - or almost always - the one God talked about. His reason for saying this is that the word “God” implies as its semantic minimum the idea of power on which all reality depends. In another way, the same idea is expressed in the minimal description that the word “God” refers to a power that determines everything, but this minimal description does not provide a full idea of God.

Although Pannenberg’s view is in essence correct, it does fail on closer examination. As previously stated, in many scientific writings, contemporary scientists usually invoke the name “God” to fill in whatever gaps may exist in their scientific knowledge, at any particular point. The problem with this method is that as scientific knowledge develops, the gaps may appear to become smaller and smaller, and the need for God diminishes. However, it will not vanish.

The question is: What conclusions may one draw from the readily observable fact that the word “God” is commonly used in writings of contemporary scientists and science writers? The most obvious one is perhaps how the meaning of this word varies from one usage to another. Thus, one should rather be careful in gaining understanding of each usage to insure that one understands just what the author means by it. One should realise that the
idea of God cannot be exchanged for other ideas. Although it needs interpretation, it is not a metaphor for something else, or a symbol, as expressed by many science writers to evidence the changing needs of human hearts.

In any event, the word “God” refers to a power. Even those who believe in the gods of polytheism refer to them as powers. In the case of the one God, there is only one such power, and one then regards all finite reality as dependent on this power. One cannot understand finite reality in its depth according to Pannenberg (1991:9), without reference to God. The very idea of the one God implies that all finite reality depends on Him. The God of the Bible is sovereign, and nothing is free from His sovereignty. He permeates all reality, whether that reality is explainable or not by the present state of scientific knowledge. Therefore, in the view of the author, one needs to think and ask the important question of whether (natural) science has anything to offer theology. Thus, before any meaningful dialogue with science can take place, an answer to this question is needed, and the following considered before deciding.

- Both science and religious beliefs concern themselves with facts and opinions and both rely on evidence. Facts therefore have value only when correctly interpreted.

- Both science and theology are interpreted in the context of a community, not in isolation.
• Both science and theology are open to change when provided by new insights about the way things are.

• Both science and theology realise the world makes sense, and both want to ask why it does.

Although several scientists are conservative, and are usually unwilling to give much time to the unexpected unless they have good supporting evidence, there is a paradigm shift that is beginning to take place in the scientific world. This is especially true, if the results suggest that they need to make radical changes to their understanding.

One also needs to be realistic and say that scientists do, and always will look back, to authoritative experimenters setting the foundations of science. In contrast, Christians will always look to the Bible as a witness to the consistent revelation of God in Christ. Yet, despite these differences, there is no doubt that there is room for dialogue, it just depends on which partner one uses for this dialogue.

In concluding this section, one may say that in the past, it was possible to retain a religious interpretation of the physical and mechanical structures of the world, and to look directly to God as the cause of everything which humanity
was unable to understand or even describe. The problem is, as humanity has advanced in their understanding of the physical and mechanical workings of the world, a religious interpretation of the unexplained has become irrelevant. Unfortunately, science now only invokes the name of God to those unexplained areas in their research. The God of the gaps is the immediate answer for the scientist still searching for answers. Although one can recognise that God has allowed the increase of knowledge, scientific writing has largely removed God out of the physical and biological context, especially when answers discovered are natural. Science no longer looks for a scientific theory based on God as the sole mechanism. Rather, they rely on their limited knowledge as the primary source of explanation, and they do their physics and biology without God, yet before God. Science will do well to realise that the spiritual realm coexists with the realm of the natural. Similarly, these realms are not only interrelated, but also within the sovereignty of God and both realms are dependent on Him. The God of the Biblical Christian world-view transcends scientific explanation and God is in no way dependent on it for His existence - rather, they are dependent on Him for their existence. Finally, a scientific investigation of these realms cannot prove the existence of God. Instead, such observations and studies can and do provide evidence in support of the Biblical Christian faith.
2.8 The Dialogue Partners

Barton (1999:24) argues well for the need of the correct dialogue partner when it comes to the interaction between the two disciplines. He suggests that while many scientists believe that they can provide reliable hypotheses, some scientists claim much more. To them, there is no truth but scientific truth. These particular scientists follow a form of philosophy called *positivism*, a philosophy that dismisses all metaphysical and religious ideas as meaningless - sometimes termed *logical positivism*. This particular group are insistent that only insights gained from scientific experiments have any meaning, whereas those gained from metaphysics - a form of philosophy which explores the nature of ultimate reality - are invalid. Accordingly, science then becomes the sole method of deciding truth, and the only relevant means of discovery. One could term it a modern "religion" in itself, as it becomes - in a sense - the object of worship. Often this is termed *scientism*, or science separated from society.

2.9 Critical Realism

Natural science and the Christian faith must both trust that the universe favours the critical realist whose view is that models of reality can only ever make good guesses as to what really exists. Expanding on this, Leplin (1984: 260) says "progress towards truth requires constructive thought; the building of metaphors
and models to emit growing insight”. He further puts forward that “our theological theories do indeed refer to a reality beyond and greater than ours”.

To clarify Leplin’s statement, Barrett (2004: 10) suggests that the approach known as critical realism has become the working assumption of by far most scientists and theologians. At least, he states, those within the community of the Christian faith, rather than, according to Mooney (1991:310), the naïve realism of past ages which claimed direct correspondence between knowledge and the reality to which it refers.

Clearly, both groups appear to accept that absolute and certain knowledge is simply not attainable since many cultural, personal and conceptual filters intervene between the knowing subject and the object known. In the view of Barrett (2004:10), at all levels, the enterprise of understanding reality has turned out to be continually open to correction and refinement. Unlike the popular stereotype of closed minded ideologies rigidly defending propositional statements, theologians have, as a group, been experiencing for some time now a genuine modesty on what they know and how they know it. Their enterprise of understanding reality has turned out to be as corrigible as that of science.

To bring a balance to this, Peacocke (1993:4) argues that critical realism in theology, maintains that theological concepts metaphors and models should be regarded as partial and inadequate but necessary, and thus, the only way of
referring to the reality that is named as “God” and to God’s relation with humanity. Case-Winters (1997:357) believes, that both science and theology do provide models that exercise intense influence on human behaviour. One could present it as follows:

- Science provides models of the way things are or how the world works.
- Theology provides metaphors of ultimate reality, or that which is the highest, best, and most valuable. These metaphors intend to present a true picture.

The difficulty one faces is the “how” of merging this interaction between science and theology? As previously stated, interaction between the two is not only desirable, but necessary. Both believe that models are essential and provide the soundest ground to interact from, but how?

Accordingly, Barbour (2000:7) proposes four ways one could conduct this: Conflict, Independence, Dialogue, and Integration. He believes that each type has several variants that differ significantly, but the variants have features in common that allow various groupings of them, for example:
• **Conflict:** Is scientific evidence for evolution incompatible with any form of deism? Can the natural sciences and theology believe in both God and evolution?

• **Independence:** The view holds that science and theology are strangers who can co-exist, as long as they keep a safe distance from each other. Accordingly, there should be no conflict, as science and theology refer to differing domains of life or aspects of reality.

• **Dialogue:** Within this method, one may show similarities between science and theology, even when admitting differences. For example, science has boundary-limited questions: Why is the universe orderly and intelligible? Theology on the other hand can use concepts from the natural sciences to explain God’s relationship with the world, i.e. the scientific creation of the world including all its intricate and interwoven relationships within itself. Scripture does not give all the details, but natural science can. Both scientists and theologians are engaged as dialogue partners in critical reflection on such topics, while respecting the integrity of each other’s field.

• **Integration:** Within this structure a more systematic and extensive sort of partnership occurs, especially with those who seek a closer integration of the two disciplines. For example, astronomers have argued that the
physical constants in the early universe appear fine-tuned as if by design - theology confirms the design by Scripture.

Others like Polkinghorne (1998:22) add two other categories to this namely, *Consonance* and *Assimilation*.

- **Consonance**: In this view, science and theology retain their due autonomies in their recognised domains, but the statements they make must be capable of appropriate reconciliation with each other in overlapping regions.

- **Assimilation**: Here there is an attempt to achieve the maximum conceptual merging of science and theology. Neither is totally absorbed by the other - that would be to turn back to the picture of conflict, with a clear winner - but rather, they are brought closer together.

Based on these proposals, the author believes that the complementary model or as some call it, *the complementarity of science and theology*, is the most preferred when dialoguing with natural science. Barbour (2000:77) argues though, that the complementarity model cannot be used in science and theology as they are practiced in differing situations and serve differing roles in human life. The author disagrees with this view, as natural science and theology do share common ground, that of creation. Barbour (2000:77) further states that the
complementary model provides no justification for an uncritical acceptance of dichotomies. Unfortunately, this seems in contrast to his previous statement where he argued that complementarity does not rule out the search for unity, nor does it support the claim that scientific and religious assertions are totally unrelated and independent. However, in the author’s opinion one can find common ground between natural science and theology when trying to understand reality. The reason being, the epistemology used by each discipline to achieve a correct understanding of reality is open for critique, especially the view of ontology held by both regarding what reality is. Thus, when one realises that the two views are working from different premises to achieve a common goal, one concludes that the one overriding factor is that God creates and sustains everything, whether science chooses to recognise this or not. Therefore, the complementary model, which the author has opted for as a working method will, for all intent and purposes, show that science and theology are not mutually exclusive, but do offer complementary perspectives on the universe and creation.

One could argue the positive and negatives of all the models referred to, but what is needed is a framed proposal on a unified system that both natural science and theology can work from. Indeed, a system that could incorporate - when and where needed - more than one of the mentioned models, would be the ideal system to work with. Thus in the following section, a proposed model will be presented which will be suitable, in the authors view, for both disciplines.
2.10 An Alternative Model from Theology

It does seem that within the subfields of theology, one group, the systematic theologian, has taken the lead in developing a working relationship with the natural sciences. It has been the systematic theologian who has carefully examined scientific methods or models and adopted them into scientific methodologies. From there they have advanced in certain cases to incorporate knowledge gained from science into formulating doctrinal beliefs. On the side of science, one has to also acknowledge that there are many scientists who have turned to the discipline of systematic theology in order to systemise the interaction between the two disciplines.

One only has to read the creative works of scientists like John Polkinghorne (1994, 1998, 2000), Alister E McGrath (1990, 2004, 2005), Ian Barbour (1997, 2004) and Arthur Peacocke (1984, 1993, 1998) - to name a few - who have successfully dialogued and brought consonance to the two disciplines, by bridging knowledge into works that have had a profound effect on each discipline. Although some of these authors have made alternative proposals on methods of interaction, they have all, in one-way or another, incorporated systematic theology into the flow of their work and made it into one dynamic unit. A unit that incorporates one or more of their own mentioned models or systems.
of interpretation. This consonance of knowledge has led many to a greater understanding of how creation and the Bible work together.

There is no doubt that this rethinking and systemising of the natural sciences with theology has led to more questions about God than answers. Theology paints a picture about God which is mysterious, indescribable and transcendent, i.e. God is beyond human comprehension. Further to this, the special revelation of God in Christ Jesus only further heightens this mystery of a Divine God in total control of the universe and all that occupies it. Yet, as Peacocke (1984:101) rightly states, that mystery is by no means confined to theology alone - what characterises twenty-first century science is a new appreciation of the mystery of existence. Quantum physics, with such things as \textit{indeterminacy} and \textit{vacuum fluctuations}, has increased knowledge, while it has humbled previous hubris for assuming that causal explanations would soon be understood. In many spheres of study, science has come to the realisation that the foundations of physical reality are more elusive than once thought.

If natural science and theology are, as claimed, partners in the great human quest to understand reality, then they are capable of interacting with each other. Whatever model or system the scientist or theologian chooses to use for his or her research, should always be to the benefit of understanding creation. Besides this, it should also lead one to a greater understanding of who God is, and what He has created existence for.
In the first half of this chapter, ideas were presented about both the meaning and the potency of systems and models in working towards finding a solution that would benefit both natural science and theology in its search to understand what entails reality. In the following section, the concentration will be on how an understanding of the different categories that make up reality impacts both science and theology in their search for truth. This particular study will be presented under the banner of metaphysics - a branch of philosophy that studies the different categories of reality. One could expand this definition a little by saying that it deals with a very general picture of what the world is like, what things there are in it, and what one can know about it. It engages in the attempt to know reality, not a mere appearance of it.

2.11 Introducing Metaphysics

Firstly, what is there and what is real? The answer according to Quine (1963:1) is simply “Everything”. Obviously this is correct; whatever there is, is included in “everything”, while whatever does not exist is really “nothing”. But obviously both questions need much more explanation than this. What is needed is to break down the question “what is there”, into more specific questions; questions to which metaphysics will probably give detailed answers to.
Therefore, the first rule in understanding metaphysics is this: One may take as premise for a metaphysical argument anything one knows or has good reason to believe to be true. This would certainly include ordinary perceptual beliefs such as “I believe that I am now seeing a tree”, as well as the many sorts of beliefs justified through sense perception, including beliefs about historical facts and well-established results of science. Another broad category of beliefs can be classified under the heading of logic, for example “no statement can be both true and false”. One can also relate this to mathematical equations: “If one adds equals to equals, the result will be equal”. Justification here seems not by sense perception, but by some sort of rational insight or understanding. One can therefore define logic as the theory of reasoning, proof, thinking or inference.

Further to this, there are still other beliefs which do not readily fit into any of these categories. For example: “Nothing begins to exist without a cause”, this is something all believe, but what are the grounds for accepting it? Another example is: “Nothing we do now can change the past”. These examples are things one learns by experience and accept as a given fact and are not open to debate, as the argument will lead nowhere. No amount of research will find a solution to the question. The only logic answer one can come to, is that there really is no answer to these questions. This does not mean that one ceases from searching, it simply means that instead of searching for answers, one should rather be studying the statements. This is the goal of metaphysics, and usually
falls under the subcategory of epistemology, the study about knowledge, including how and to what extent one possesses different kinds of knowledge.

2.12 An Approach to Problems of Knowledge

Every philosopher, theologian and scientist, seeking to interpret an infinitely complex reality and universe, chooses from it elements which seem to him or her to be of most worth as principles by which to organise the rest of it. Scientists are scientists because they believe that their way of finding truth is the most beneficial way and his or her object of search the most important. The theologian does the same about the apprehensions and expressions found in Scripture. One could therefore carry this type of thinking to many other spheres of study as well.

Consequently, scientists and theologians are cautious about the varying aspects of post-modern thought. This is especially so when the tendency is to embrace varying points of view as equally valid, and to deny the existence of an objective reality with which one has to deal with. For example, many post-modern thinkers incline themselves to dismiss the notion of absolute truth or reality and reject any claim to absolute foundational knowledge. Polkinghorne (1998:14) elaborates on this by stating that many see their disciplines as engaged essentially in a quest to know and understand aspects of reality. Thus inferring reality, material or Divine, from the way their models and theories make
sense. This is especially so when dealing with great swathes of physical data on the one hand or great swathes of spiritual experience on the other, and indeed from the explanatory power displayed by these models and theories.

Doubtless, science, especially physics, has achieved enormous success as a way of knowing the structures and processes of the material world. It has done so by limiting its realm of inquiry to that which can be empirically examined. But, as will be further explored through metaphysical models, this is an inadequate way to try to obtain a holistic picture of reality.

Thus, according to Barrett (2004:11):

For a genuine theory of everything, a meta-narrative which brings together the unfolding world through human experience and theology and considers the insights and knowledge derived from other disciplines is the ideal model for a theory of reality.

In the following section, several metaphysical theories concerning how the world is perceived, will be considered and evaluated.

2.13 The Question of God

According to Bracken (2000:362), while there are multiple images to describe the infinite and strictly incomprehensible reality of God, relatively few of these images can be employed as the governing idea within a systemised theology
claiming to describe the God-world relationship. With respect to his own
metaphysical scheme, Whitehead (1978:343) points out "God is not to be
treated as an exception to all metaphysical principles, invoked to save their
collapse. He is their chief exemplification." Thus one could say that only a few
images on closer scrutiny could be incorporated into a metaphysical scheme, as
an exemplification of its basic principles.

Some might say that this statement limits the infinite reality of God, as
this renders Him finite by incorporating Him into a human metaphysical scheme.
But, the obvious reply is, one is not dealing here directly with the reality of God,
but with the more limited concept of God which is working within a given
metaphysical scheme. Therefore, one could say that the metaphysical scheme
as a whole, functions as a model or extended metaphor for the God-world
relationship. Barbour (1997:117) notes with respect to the use of models in both
theology and natural science, that models "are neither literal pictures nor useful
fictions, but limited and inadequate ways of imagining what is not observable.
They make tentative ontological claims that there are entities in the world
something like those postulated in the models".

Although Bracken (2000:362) agrees, he does state that provided one
respects the analogical character of the metaphysical system as a whole, one
has every right to insist that the idea of God within the system be governed by
the same metaphysical principles as every other concept within that system.
Thus, if one chooses not to be governed by these same principles, the system then removes the idea of God and the system is consciously or unconsciously atheistic. One could say that it effectively *prescinds* from the reality of God in working out a theoretical scheme for understanding the world. One could then rightly state that an atheistic viewpoint will then emerge from the study. Besides, while this is a perfectly legitimate methodology for the use of models within natural science - since scientists *ex professo* are seeking a naturalistic explanation of events within this world - it is definitely a paradoxical procedure for theologians supposedly seeking a rational explanation of the God-world relationship.

Rightly, one could state that there are a limited and exclusive number of ways to not only explore the reality of God, but reality as a whole. The following section will review these systems and decide which system best fits into the Biblical world-view of God and reality.

Before beginning with this study, it would be sensible to review what Pannenberg (1990:xiii) suggests concerning metaphysics. He writes:

> In recent years we have heard from many sides that it is necessary to return to metaphysics, the field of study once taken to be ‘first philosophy’ as the object of our intellectual attention. It cannot be a matter of indifference to theology when philosophers again take upon themselves these themes that have been neglected for so long. Christian theology is dependent upon the conversation with philosophy, especially for the clarification of its discourse about God, and
also for its work on the relationship between God and created reality. Moreover, theologians have repeatedly made their own contributions to the development of philosophical thought within the history of metaphysics.

2.14 Differing Metaphysical Systems

There is no doubt that the teaching of Scripture about the relationship between God and creation is unique among the religions of the world. The Bible teaches that God is distinct from His creation. He is not part of it, for He has made it and rules over it. The term often used to say that God is much greater than creation is the word *transcendent*. Very simply, this means that God is far “above” the creation in the sense that He is greater than the creation and He is independent of it.

However, God is also very much involved in creation, for it is continually dependent on Him for its existence and its functioning. The technical term used to speak of God’s presence in creation, is the word *immanent*, meaning “remaining in” creation. The God of the Bible is no abstract deity removed from, and uninterested in His creation. The Bible is the story of God’s involvement with His creation, and particularly the people in it. Job affirms that even the animals and plants depend on God: “In His hand is the life of every living thing and the breath of all mankind” (Job 12:10). In the New Testament, Paul affirms that God “gives to all men life and breath and everything” and that “in Him we live and move and have our being” (Acts 17:25, 28). Indeed, in Christ “all things hold
together” (Col. 1:17), and He is continually “upholding the universe by His word of power” (Heb. 1:3). God’s transcendence and immanence are both affirmed in a single verse when Paul speaks of “one God and Father of us all, who is above all and through all and in all” (Eph. 4:6). In the following section, the different views by scholars regarding God’s transcendence and immanence will be explored, and a conclusion reached as to the most viable view regarding God’s involvement in His creation.

2.14.1 Pantheism and Panentheism

As an alternative to models or systems of the God-world relationship, McFague (1987:72) offers the metaphor of the world as God's body, i.e. a pantheistic view of God. However, she does though admit the unavoidable limits of this line of thought, and does concede that the world is literally not God's body since God is not a physical entity like humankind. But, she states, thinking of the world as if it were God's body allows one to overcome the distance between God and the world which is imposed by the monarchical model of the God-world relationship. Similarly, Clayton (1997:47) says that the fear of pantheism has led theologians for far too long to separate the world too severely from God. This, in his view, leads to an excessively strong doctrine of the transcendence of God that is incompatible with the fundamental insights of a Biblical creation.
In defence of McFague’s view, she does say that the danger within pantheism is that it seems to make God dependent on the world for His existence much as humans are dependent on their bodies for existence. Therefore, McFague (1987:72) proposes that this metaphor for the God-world relationship should rather be understood as a form of panentheism, as opposed to pantheism. She goes on to state that God is a personal agent apart from the world even though internally, God associates to everything in the world (1987:78-87). Only in this way, as McFague sees it, can the God-world relationship represent "a destabilising, inclusive, non-hierarchical vision of fulfillment for all of creation."

In reference to panentheism, Geisler (1976:193) says that it is not to be confused with pantheism, although they do have things in common. Panentheism is the belief that God is in the world the way a soul or mind is in a body; pantheism is the belief that God is the world and the world is God. An example of this thinking is given by Mander (2000:199) a confessed pantheist who stated “I am a pantheist. To be more specific, I believe that the universe contains just one substance which, as a being both spiritual and infinite, we should call ‘God’ or the ‘Absolute’.” However, when one considers pantheism and panentheism as metaphysical systems, there are many problems.

According to Grudem (1994:269), Pantheism denies several essential aspects of God’s character. If the whole universe is God, then God has no
distinct personality. God is no longer unchanging, because as the universe changes, God also changes. Moreover, God is no longer holy, because the evil in the universe is also part of God. Another difficulty is that ultimately most pantheistic systems (such as Buddhism and many other eastern religions) end up denying the importance of individual human personalities: since everything is God, the goal of an individual should be to blend in with the universe and become more and more united with it, thus losing his or her individual distinctiveness. If God himself (or itself) has no distinct personal identity separate from the universe, then we should certainly not strive to have one either. Thus, pantheism destroys not only the personal identity of God, but also ultimately, of human beings as well.

On the other hand, while attempting to avoid the extremes of some other views of God, the panentheistic world-view does try to develop a positive metaphysics of its own. It also provides some important insights, such as its arguments for the existence of God, and its rejection of the pantheistic identification of God and the world. However, as a total world-view, the God of panentheism is inadequate. The basic dipolar idea of God as an eternal potential seeking temporal actualisation is self-defeating. No potential can actualise itself; and if there is some pure substance outside the panentheistic God that actualises it, then one must assume a theistic God of pure act to account for the panentheistic God.
2.14.2 Agnosticism

As previously expressed, there are various approaches or methods to the question of God, some positive and some negative, of which perhaps the most widely held in the latter category is agnosticism, which literally means no knowledge.

Although the term agnostic was coined by Huxley (1889) in his writings “Agnosticism and Christianity”, it was the writings of David Hume, and Immanuel Kant that laid down the philosophical basis of agnosticism. Regarding this view, Huxley (1889) wrote:

I took thought and invented what I conceived to be the appropriate title of ‘Agnostic’. It came into my head as suggestively antithetic to the ‘Gnostic’ of church history who professed to know so much about the very things of which I am ignorant, and I took the earliest opportunity of parading it to our society to show that I, too, had a tail like the other foxes…”.

According to Geisler (1976:26), there are two kinds of agnosticism; limited and unlimited. The former is no threat to Christianity but is compatible with its claim of finite knowledge of an infinite God. Unlimited agnosticism however, is self-destructive, for it implies knowledge about reality to deny the possibility of any knowledge of reality.
In a lightly worded defence of agnosticism, Raman (2004: 953) writes that like the words faith and doubt, agnosticism is often misunderstood. One may reject it, he states, because it hesitates to affirm a reality beyond the concrete world of appearance or as some call it *commonsense reality* in which one normally functions. Some have argued that agnosticism leads to meaningfulness because it insistentely refuses to attach long-range significance to anything. Therefore, many believe that it further leads to hopelessness because it confesses that one is totally lost as to what life is all about. Thus, this leads to an atheistic outlook because it says, directly or indirectly, that there is not sufficient evidence for one to believe in the existence of God. Cantore (1977:172) succinctly expresses this view by saying “Science leads to agnosticism, and agnosticism breeds desperation”.

Finally, in the view of Geisler (1976:26) agnosticism is a subtle form of dogmatism. In disclaiming the possibility of all knowledge of the real, it stands at the opposite pole from the position that would claim all knowledge about reality. Agnosticism is negative dogmatism, and every negative implies a positive. Thus, total agnosticism is not only self-defeating but it is self-deification. Only an omniscient mind could be totally agnostic, and finite human beings confessedly do not possess omniscience. Therefore, the door remains open for some knowledge of reality. Reality is not unknowable; therefore, according to Raman (2004:954), agnosticism can lead to paralysis of action, meaning that if one is
not sure of heaven and hell, of punishment or a rewarding God, one cannot choose between moral options.

The following three metaphysical systems can be grouped as they are similar in thought patterns and outlook, and all three require, as the heart of their belief system, logic, experience and evidence as tests of truth.

2.14.3 Rationalism

According to Steenmark (2000:187), a central concern in modern philosophy of religion, is the question of whether it is rational to believe in God. A particular area within philosophy of religion that deals with this and similar questions is sometimes called Religious Epistemology or Epistemology of Religion. Roughly, it may be defined as the attempt to understand and explain how one conducts belief formation and regulation within religion. Reason for this, is to assess whether these belief formations and regulations are acceptable and successful ways of carrying out one’s cognitive affairs in this life. If this is not acceptable, to then propose other ways in which religious belief formation and regulations should be conducted. One could say that the heart of rationalism is the thesis that the rationally inescapable is the real.

Rationalistic theism holds that the existence of God can be explained with logical necessity. Geisler (1976:29) contends that what characterises rationalism
is its stress on the innate or *a priori* ability of human reason to know truth.

Basically, rationalists hold that what is knowable or demonstrable by human reason is true. With its stress on the mind, rationalism holds to an *a priori* aspect to human knowledge, that is, something independent of sense experience. By contrast, empiricists state the *a posteriori*, or what comes through empirical experience. Geisler (1976:29) further states that in like manner, rationalists argue for innate ideas or principles, whereas empiricists believe the mind is a *tabula rasa* or blank slate on which sense experience writes its impressions.

### 2.14.4 Experientialism

Experientialism offers *experience* as the final court of appeal. The experience may be special or general, private or broadly available, but it is the self-attesting character of experience which verifies the truth-attached claim.

One just has to look at Jung’s metaphysical framework (see Jung 1975), to understand the hidden dangers of this particular system. According to Kotsch (2000:229), Jung accompanies his psychological epistemological and his empirical and hermeneutical methods by a meta-theory of experience. This experience centres on a belief in the psyche as a *potentially* experiencable realm in contrast to a non-experiencable realm where spirit and matter co-mingle.
Thus, Jung’s entire psychology is pragmatic, and is based on experience. In “letters to Werblowsky” (see Jung 1975) he stated:

The realm of the psyche is immeasurably great and filled with living reality. At its brink lies the secret of matter and of spirit. I do not know whether this schema means anything to you or not. For me it is the framework within which I can express experience.

As a source and basis of truth, Jung’s claim may be correct, but as a test or warrant for the truth of that claim, Jung is decidedly wrong. According to Geisler (1976:80), no experience is self-interpreting and there are conflicting truth claims built on experience with no purely experiential way to adjudicate between them. Experience is merely a condition of persons, whereas truth is a characteristic of propositions.

A retreat to mystical and inexpressible experience as in Jung’s case, is inadequate because it is both self-defeating to suggestively describe the indescribable and impossible and to recognise or distinguish it from anything else unless it is describable. Jung’s metaphysical framework and experientialism as a metaphysical system for understanding religious truth, is unfortunately either meaningless or self-defeating.
2.14.5  Evidentialism

In the view of the evidentialist, truth is based on facts or events, or as Geisler (1976:93) puts it, in experiential or empirical data. It calls one to the basic facts or events of the world, or at least to some of them. Truth must be based on facts, not in ideas or theories, or else it is not grounded at all. Many evidentialists place strong emphasis on the objective and public nature of facts. When it comes to religious beliefs, Cantens (2004:772) states that

Some philosophers consider belief in God to be rational if and only if there is sufficient evidence to support the belief and the strength with which one holds the belief is proportional to the evidence that supports it. This view is called evidentialism.

Evidentialism, like experientialism, do offer some contribution to ones understanding of events and facts regarding religious truth, but like experientialism, it fails to adequately answer questions surrounding God and the world.

In defence of evidentialism, Christianity is, according to Geisler (1976:83) a historical religion, and it is common for Christian apologists to appeal to the historical evidence of the life, death, and resurrection of Jesus Christ as a verification of its claim to be true. However, the appeal to evidence alone is by no means limited to the past or historical evidence. No meaning is inherently
and inseparably attached to a given set of facts, and no one can assign ultimate
meaning or truth to facts unless it is from the overall perspective of a world view.

2.14.6 Pragmatism

The basic view of a Pragmatic or Pragmatist is that one cannot think or even feel
truth, but one can discover it by trying to live it. A more detailed illustration of this
is given by McFague (1987:196) in which she argues that the main criterion for a
true theology is pragmatic. In other words, one should use metaphors about God
that are most helpful in the praxis of bringing about fulfilment for living beings.
One should therefore ask, not whether one (image) is true and the other false,
but which one is a better portrait for today. One cannot really doubt that indeed
there are some important insights provided by pragmatists that are not foreign to
Biblical Christianity. For example; Jesus said “by their fruits you shall know
them” (Matt 7:20). Christians need to display a strong practical application of
God’s word in their lives if they are to win over the sceptics and atheists.

While all these are good, and all truth must work, not everything that
works is necessarily true. In the view of Erickson (2001:43), pragmatism
emphasises that there is no absolute truth; rather the meaning of an idea lies
solely in its practical results. The goal then, is not metaphysical truth, or
statements about the nature of ultimate reality, but rather the meaning or the
truth of a proposition is its experienceable consequences (see also Pierce 1955:23-41 & James 1955:192).

One could ask: How can a person passionately believe in God when he or she has no evidence to support a belief that God is there? Many differing views work for many different people, but often these results do not relate to truth. Also, who can know what the long-run outcomes or results of belief will be? The Christian apologist believes that truth will work in the short run and in the long run, but he cannot hold that what works is true, for, many false and evil things have worked for many people for many years. No finite can see the distant future, thus pragmatism fails as a sufficient test for truth in the present.

2.15 A Theistic World-View; the only Likely Alternative?

In the preceding section, several views were briefly assessed on their theistic beliefs. In each case the views were shown to be inadequate and self-defeating in testing a world-view of God and reality. In the following section, the claim that theism is a satisfactory Biblically viable world view will be offered, in opposition to the world-views of Deism and Atheism.
2.16 Theism Gainsays Deism and Atheism

2.16.1 Deism

Unlike Deism, which holds that God created the world, but denies His supernatural intervention in it, Theism is of the belief that there is a God both beyond and within the world. That is, a Creator who sustains and sovereignly controls the world and supernaturally intervenes in it. Strong (1977:414) defines deism as, "the view that represents the universe as a self-sustained mechanism from which God withdrew as soon as He had created it". On the positive side of deism, they do hold, like theism, that God created the world. Erickson (2001:504) writes that deism also has little difficulty with the scientific data related to evolution. The departure comes by deism’s denial that God supernaturally intervenes in it. They argue, in short, that God is beyond the world but He is not active in the world in a supernatural way. According to Geisler (1976:152), deism is not presently a major world-view but its significance is both historic and lasting. The deistic movement arose during the seventeenth-century and although it flourished in the eighteenth-century, it largely died out by the nineteenth-century. It does still represent however, one of the major metaphysical positions about reality that conflicts with theism. The central tenets of deism can be summed up as follows:
• They do state that there is a God who created the universe, and He is the author, architect, and the first cause of the universe.

• The second tenet is that miracles do not occur today. Some argue that this would be contrary to God’s nature as it would then imply an imperfect universe made by a perfect God, which would then be contrary to each other.

• The third tenet is a denial of the doctrine of the Trinity. Their argument is that no supernatural events take place today and because the birth of Christ is regarded as a supernatural event, Christ in essence was not a supernatural being. A denial of the deity of Christ is a denial of the presence of the Spirit.

Dulles (2005) takes these tenets one step further, he argues that deism also suffers from grave philosophical weaknesses. He further argues that many of its proponents, specifically those in England like John Toland to Matthew Tindal (1657-1733), lacked the metaphysical principles needed to build a viable natural theology. According to Dulles (2005:25), the deist system also suffers from some internal tensions:

If there is an omnipotent God, capable of designing the entire universe and launching it into existence, it seems strange to hold that this God cannot intervene in the world He had made or derogate from the laws He had
established. He might have good reasons for bestowing some added benefits not contained in the work of creation.

A deist believes that God made the world but has no dealings with it. God created the natural world but never interrupts it with supernatural events. This view of deism is also contrary, according to Williams (1996:117), to the doctrine of providence. It portrays God as someone disinterested in the world He created. Therefore, He has neither need nor intends to involve Himself in it. Despite the many helpful emphases and prods to Biblical theism, the deistic position is decidedly inadequate. For once one admits the miracle of creation, the possibilities of other miracles follow. Indeed, the very concept of a deistic God is one that is not reducible to a purely mechanistic model that would allow for no personal intervention in the world. Therefore, according to Williams (1996:120), a doctrine of creation without a doctrine of providence readily becomes deism. In line with this thinking, Grudem (1994:271) rightly states that while deism does affirm God’s transcendence in some ways, it denies almost the entire history of the Bible, which is the history of God’s active involvement in the world. Many “lukewarm” or nominal Christians today are, in effect, practical deists, since they live lives almost totally devoid of genuine prayer, worship, fear of God, or moment-by-moment trust in God to care for needs that arise. Thus Deism is defunct both historically and philosophically.
2.16.2  Atheism

Atheists claim there is no God. They contend that there is no God in the world (as pantheism holds) and there is no God beyond the world (as deism claims). Significantly the twentieth-century has seen a marked increase in departure from God. According to Williams (1996:247), this departure can be directly attributed to the thoughts of such men as Karl Marx, Charles Darwin and Sigmund Freud. Through their views on political revolution, evolutionary science and psychological analysis, all served to view God, at best, as expendable or often as a liability. Thus atheism has come to be the compelling philosophy in all such systems.

One might single out in particular the attention paid to knowledge and wisdom in atheism. In the words of Paul, these idols take the place of God. In Rom 1:22 Paul writes that “Claiming to be wise they became fools”. When God is no longer glorified and given thanks, according to Williams (1996:247), the result is that true knowledge fades. When this occurs, there is the tendency to seek after worldly wisdom, or the wisdom of philosophers which then becomes the ultimate way of truth. Many may still use the word “God”, but more, unfortunately, as an intellectual idea and not as a living reality.
Of course, atheism is not merely a negative position. Most atheists do not view themselves as antitheists but simply non-theists. According to Geisler (1976:215) atheists, as non-theists, offer a positive view of their own which they may call humanism, materialism, naturalism, or positivism. However, these views will not be explored as they are basically all connected to the view of a non-existent God and do not really warrant an explanation.

In the view of Berkhof (1958:22), one can classify atheists into two groups namely the practical and theoretical atheists. The former, in his view, are simply godless people, who in their practical life do not reckon with God, but live as if there was no God. The latter are, as a rule, of a more intellectual kind, and base their denial on a process of reasoning. They seek to prove by what appears to be convincing rational arguments, that there is no God.

However, according to Geisler (1976:234), this category of atheism provides some valuable correctives to and modifications of theism. Many of its arguments either correct misconceptions some theists have of God or of His relation to the world, or else they expose contradictory theistic concepts. Atheists have been active as well in contributing to humanistic causes and earnest in scientific endeavours.

But, as a total world-view atheism does not measure up. Firstly, its arguments are invalid and often self-defeating. Secondly, many atheistic
arguments are really reversible into reasons for believing in God. Finally,
atheism provides no solution to basic metaphysical questions regarding the
existence of the universe, or the origin of personality and the actualisation of the
world process. Atheists must believe that something comes from nothing, that
potentials actualise them and that matter created mind. It seems much more
reasonable to believe in a God who made something where there was nothing,
who actualised the potentials that could not actualise themselves, and whose
mind formed matter.

2.17 Conclusion

In the beginning of this chapter it was proposed that strong suggestions are
continually put forth for the non-existence of God. It was also suggested that
God is in reality unknown apart from the Bible, and it is only through the death
and resurrection of Christ and by the infilling of the Holy Spirit that life becomes
real.

It was also stated that from a scientific point of view, it does seem that
science is confused about whom the God of the Bible is, and what He can do.
This has lead to several differing world-views on what makes up reality, which
was then briefly explored concerning the problems related to them.
A question was also asked if science, in its confusion of what reality is, could bring any value to theology and its study of reality. A concern was then raised as to the use of the word “God” in scientific writings. It was established that the use of the word god was merely a word used to fill in the gaps of scientific knowledge where they have failed to adequately answer their own questions. It was clearly stated that when “technology” fails, science conveniently assumes a “God of the Gaps” hypothesis.

It was further argued that even though science invokes the name of God as a convenient stop-gap, there is room for interaction between the natural sciences and theology. It was stated that both groups need to realise that absolute and certain knowledge is simply not attainable, and that dialogue between the two groups must be pursued.

Because of this statement, several areas of interaction were presented and evaluated which would or should still respect the integrity of each field. An alternative model from theology was also explored as a bridge between theologians and scientists who have each others interests at heart.

The chapter then moved into the second half where an introduction of what makes up a metaphysical world-view, and how it can be used to study the problems of knowledge was presented. Within this study the question of God was briefly explored and the differing metaphysical systems were introduced.
and evaluated for their consistency in presenting a viable world-view on what is reality in the light of a theistic world-view. It was then concluded that any view that contradicts itself or destroys itself in the process or act of affirming itself, is self-defeating and false and only theism is actually undeniable. Theism offers an argument with undeniable premises that leads inescapably to the existence of an infinitely perfect and powerful Being beyond this world, who is the current sustaining cause of all finite, changing, and contingent beings. It was further argued that a world-view, that is, a philosophical position about all that is, cannot be established as true simply because it is non-contradictory, since every major world-view might be internally consistent. One could then confidently state that by implication, this would mean that theism, the only remaining non-contradictory view, would be true by the process of elimination.